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THE PHILOSOPHY OF MEDICAL SCIENCE,

Considered with special reference to Dr. Elisha Bartlett's "Essay on the Philosophy of Medical Science."

A BOYLSTON PRIZE* ESSAY, BY E. LEIGH, M.D., TOWNSEND, MASS.

"I *fear* he has got hold of his pitcher by the *wrong* handle."
Altered from J. J. BECCHER, *as quoted by* DR. BARTLETT.

[Communicated for the Boston Medical and Surgical Journal.]

WE can hardly place too high an estimate upon the value of a sound philosophy of medical science. No one will deny this statement. Even those who contend most earnestly for "observation" and the strictest adherence to facts, will give to it their full assent. Though they will have no philosophy *in* science, they will insist upon their peculiar philosophy *of* science.

Indeed it is most obvious that the very shape the science will assume in the mind of the physician, or in the treatise of the medical writer, will be conformed to his views of its true nature and proper elements; so that, to the mature scientific physician, a sound philosophy of his science is of fundamental importance.

To the student in medicine, also, it is of no less consequence. The whole character and course of his studies will be shaped by it. Indeed *some* philosophy of science, either true or false, he *will* have, for no mind can be employed in the study of science without it. And a sound philosophy he will need, and will feel the need of at the outset, if he has had any experience in the study of other sciences. He will wish to know what he has before him. He will wish to have some general idea of the ground upon which he is about to tread. He will desire to ascend some eminence from which he can take a general survey of the country he is about to explore, and learn something of its general character and prominent features, before he descends to examine it in detail. In this way he will be prepared to proceed in the right direction, to make the most rapid progress, and prosecute his investigations in the wisest and most successful manner.

The very title, therefore, of Dr. Bartlett's work will at once attract

* Awarded by the Committee of the Boylston Medical Society, January, 1849.

the attention of the scientific physician, and of the reflecting student. The volume itself he will find to be one, in which he must necessarily take a deep interest. The perusal of it cannot fail to afford him pleasure, to give him valuable instruction, and furnish him food for thought. There is a charm in the style in which it is written, a beauty and freshness about it, a clearness, precision and vigor in its language, that is truly refreshing as we turn to it from our ordinary medical reading. There is a sincerity and earnestness in the author's manner, an ardent devotion to the cause he has espoused, that at once takes captive the mind of the reader. Moreover, the error he is combating, the error of substituting mere theories, hypotheses, assumptions and speculations in the place of facts and truth, is one of the gravest character—one which has exerted a pernicious influence upon our science from the earliest ages—one which is venerable for its antiquity, and carries with it the influence of great and honored names, and still maintains a strong hold upon the minds of men, though some of its more prominent developments are of recent date, and are only looked upon with ridicule or contempt. The cause he has espoused, the cause of fact and truth against theory and false doctrines, the cause of observation against speculative fancies, of true science against science falsely so called, must ever enlist the sympathies and engage the attention of truly scientific minds. He has done his work, too, in many respects, in such a masterly manner, that we involuntarily entertain for him more than the respect which his professional standing and reputation would demand; we feel that we are sitting at the feet of a master in science.

But with all our admiration of the author's abilities, of the vigor of thought, and beauty and freshness of style which his work exhibits, with all our sympathy with the cause he has espoused, with all our readiness to unite with him in excluding from the domain of science all speculative fancies, and unfounded assumptions, we cannot receive the philosophy he has thought necessary to adopt in order to secure this end. It is not the true philosophy which fact and reason teach.

The common idea of the philosophy of science is doubtless the true one. In accordance with this idea of it, science embraces,

I. Certain *Primary Truths*, or fundamental principles, upon which all its reasonings are based. These belong to each of the sciences in common with all the others. Two of the more important, only, need be mentioned here. One is the "principle or law of causation," that "every beginning or change of existence has a cause." The other is "the principle or law of uniformity," that "matter and mind have uniform and fixed laws," that "all the processes of nature take place in accordance with uniform and permanent laws."

II. Science embraces also certain *ascertained and classified Facts* (or, as Dr. Bartlett calls them, phenomena and their relationships), some of them ascertained by observation directly—others ascertained by reasoning from previously known facts and established principles.

III. But, above all, science embraces certain *General Ideas, Truths* and *Principles*, which the thinking, reasoning mind arrives at by studying the facts that have been ascertained and classified.

Of these threefold elements does science, absolute science, consist. Take away the first, the primary truths, and the whole fabric of science is overthrown, its observations and its reasoning are worthless, its facts and its truths are gone. Take away the second, the facts, and there are no means of arriving at its truths, the whole structure and its very materials are wanting, there is nothing to be seen but the everlasting foundations. Take away the third, the truths and ideas of science, and you leave the solid foundations, surrounded by a rich supply of well-selected and well-assorted materials; but the noble structure, the beautiful living temple of science, is not there.

The second class of these threefold elements—the facts—are often, in themselves considered, of great interest and importance. But their chief value lies in the truths and general principles to which they direct the mind, and which can be fairly deduced from them. It is in these general ideas, these scientific truths, these large and comprehensive principles, that science especially consists. Take them away, and you leave only a mere naked skeleton of material facts, beautifully formed and arranged, perhaps, but lifeless, powerless, inert. It is the mind, in the exercise of its higher powers, that gives to facts their significance, and, by working among them and upon them after they have been collected and arranged, draws forth and holds up to view those ideas, truths and principles, which constitute science in its highest and noblest sense, and make it the living, efficient, all-pervading thing it is.

But the philosophy of the work which has been referred to, in its attempt to banish theories and speculations from science, has left no place for its truths and principles; it has at once taken away the foundations and removed the superstructure, leaving only a limited collection of well-arranged, and well-classified materials. It admits into science nothing but "observed facts." No other fact however clearly proved, no idea of science however clearly discerned, no principle of science however well established, no scientific truth however well known, no doctrine however sound, can gain admittance. Nothing can enter but mere facts; and each of these must enter by itself, through one of the five senses; and then poor pitiable reason is allowed to look at it, see what it looks like, and put it in its place by the side of others like it—that is all! This is absolutely all the author allows science to consist of. He makes it a mere cabinet of such dead material facts as the five senses are able to pick up on the surface of things.

Such a philosophy he never could have dreamed of, had he not been, either misled by the dogmas of the grossest materialism; or, what is more probable, blinded by his ardor to demolish speculative theories. As it is, he has set up an hypothesis against all hypotheses; a theory against all theories; an assumption against all assumptions; a mere speculation against all speculations; a false doctrine by which to annihilate all other false doctrines. For such in reality is his philosophy; it is hypothesis, theory, assumption, speculation, false doctrine. His leading doctrine, "that all science consists exclusively in phenomena and their relationships classified and arranged," is so far from consisting of "phenomena and their relationships," that it is not even based upon them, or deduced

from them; it is neither the result of observation nor the deduction of reason; but is a mere assumption, a speculative doctrine contrary to both.

The term "relationship" which he uses, if understood in its widest sense, might, perhaps, include the truths and principles of science. But he does not permit us so to understand him. He is too great a master of perspicuous language for that. Indeed, for him thus to use the word, would be, to defeat his own object, and to leave open the very loop-hole for the entrance of speculative theories into science, which he is so anxious to close. But he himself tells us his meaning clearly. Throughout his work he expressly excludes all truths and principles from science, endeavoring to reduce them all to the category of *phenomena*. Besides, all his relationships are *observed* relationships; and, as appears from his remarks upon marble (pp. 12–16), are only phenomena of a particular kind, compound phenomena—phenomena observed between related substances, such phenomena as are observed when sulphuric acid acts upon marble, or a piece of marble falls to the ground. The facts observed respecting the "sensible properties" and "intimate composition" of this substance, he calls its "phenomena;" and the facts observed in regard to its geographical and geological distribution, and when it is brought into chemical and physical relations to other substances, he calls "relationships." Here, his phenomena are what is observed in the marble itself, when examined alone, apart from other things; and his relationships are the phenomena observed when the marble is considered in connection with and acting upon other objects. They are, after all, only observed facts or phenomena. Indeed when speaking (p. 25) of the "phenomena or relationships" of polarized light, he makes the two words synonymous. But whatever he may mean by "relationships," he means something that is observed, and he does *not* mean any truths or principles that the mind acquires by thinking and reasoning upon and studying those facts which have been ascertained and classified. And inasmuch as all his relationships thus appear to be phenomena, and the word phenomenon in itself signifies something that appears, something that is observed—the two words, "observed," and "relationship," in his statement of his principles are superfluous, and his theory may be reduced to this simple form—"All science consists exclusively in phenomena."

But such an examination of the author's expressions is perhaps unnecessary. The language in which he states his theory is so clear, so precise, so positive, so often repeated, that it is impossible to mistake his meaning. The favoring eye of a friend, admiring his peculiar excellencies and approving his general object without strictly scrutinizing the method by which he has sought to secure it, might perhaps overlook this at first. But even that friendly eye on being directed to this point, could not fail to see it through the transparent language of the author, lying there, as it does, in all the distinctness of outline which his clear intellect has given it.

The following are some of his strong and clear statements of his theory.

After referring (page 7) to the "common feeling" that facts do not constitute the whole science, but are only the foundation—the basis—upon which it rests, or the materials of which it is constructed, he affirms, on the contrary, that "The science *is in the facts and their relationships classified and arranged, and in nothing else.*" They "constitute in themselves and alone the science and the whole science to which they belong. The science, thus constituted, is, so far, complete. No process of inductive reasoning or any other reasoning, no act of the mind, can add anything to what has already been done. The only reasoning that has anything to do with the matter consists simply in the act of arranging and classifying the phenomena and their relationships, according to their differences, their resemblances, or their identity." He says of the phenomena of gravitation (p. 9), They *are* the science *in themselves, wholly and absolutely.* When all the phenomena "have been ascertained and classified, the science is complete; it is finished; there is nothing more to be done, nothing can be added to it by any subsequent process of reasoning or act of the mind."

With this language, and this theory, contrast the following language of Professor Agassiz. As the lecture* in which it occurs has never been published, this passage of the report of it has been shown to him, and has received his full assent as expressing his views. Indeed it is undoubtedly a strictly verbatim report of the words spoken by him, and it is only one instance of many in which he has expressed the same views. He says:—

"But how are we to proceed to trace a law? to investigate general views from isolated facts? It is an operation which has many and great difficulties. Trace isolated facts, and from isolated facts arrive at ideas. Derive thoughts from facts. From actual facts, from material things, derive thoughts. That is the condition; that is the aim, which we should have before our minds. Form thoughts from material facts, and form new thoughts from the combination of well-known facts, and constantly improve in our thoughts, by investigating the same long-known facts. It is not simply by adding new facts to the stock of knowledge, which we already possess, that we improve in our knowledge. From well-known facts, from generally-known facts, from facts which are known to everybody, there is new knowledge to be derived, provided we think deep enough, and we think high enough of what we see, to deduce something new from old, well-known things."

It would seem unnecessary to go further after such an expression of his views by Professor Agassiz. He tells us, not that the science is in the facts, that they constitute in themselves the whole of it, that all that reason has to do is to arrange the phenomena, that no reasoning, no act of the mind can add anything to the arranged facts; but he tells us that there are *general views* to be sought and proved by investigation, that there are *ideas* to be arrived at, that there are *thoughts* to be derived from the facts, and that this should be our great *aim*—to form *thoughts* from material facts—and to *improve* in our thoughts by investigating—that there is *new knowledge* to be derived from facts which

* Delivered before the Tremont Medical School.

have been long known and classified, by *thinking deep* and *thinking high*, and that by such thinking we may *deduce something new* from them.

Here certainly is something more than facts, and more excellent than they. Here is something of a higher nature added to the facts, by the thinking mind. Here is work, and noble work for the mind to engage in among the classified facts. This is the true view of the philosophy of science, and is one worthy of its elevated character, and of the glorious faculties of the soul which are employed upon it. The authority of Professor Agassiz upon such a question cannot be disputed. So far as authority goes, none higher can be found. We have here all that can be desired in the opinion of one who has done most for science, who has drunk most deeply of its spirit, who is most thoroughly imbued with its true philosophy.

[To be continued.]

REMOVAL OF OVARIAN TUMOR.

BY D. M'RUER, M.D., BANGOR, ME.

[Communicated for the Boston Medical and Surgical Journal.]

Mrs. Frances Rafferty, of this city, aged 28 years, of delicate frame and constitution, was delivered of her third child in the month of October, 1851, by a perfectly natural labor. About one month after her confinement, she began to complain of a severe but transient pain in the left iliac region. Upon examination of her case at that time, an unnatural fulness and tenderness was perceived, which in a few weeks presented all the features of a regularly-defined tumor. From its location and the absence of functional disturbance of any of the adjacent organs, it was diagnosed to be ovarian. The increase of the tumor from this time was rapid, so much so, that about the 20th of December, 1852, her abdomen was more distended than it had ever been during any of her pregnancies; and as the tumor had evidently become partly fluid, it was pierced by a trocar, and eleven quarts of thick, dark-colored fluid drawn off. This afforded but temporary relief, for in less than a month her abdomen had more than regained its former size. An operation for the entire removal of the tumor was *again* proposed, and consented to by the patient and her friends, who were convinced that she could live but a short time without radical relief. So great was the pressure upon the other cavities, that the utero-rectal wall of the vagina was protruded through the *labia* to such a degree as to present a tumor as large as an infant's head.

On the 20th of January the tumor was removed through an incision extending nearly from the ensiform cartilage of the sternum to the pubis. It was found necessary, from the great bulk of the tumor, to remove its fluid contents, amounting to eleven quarts, before extracting the solid part, which was found to consist of two globular masses of scirrhus infiltrated with pus, each weighing about three pounds, and connected by a dense fibrous sac of sufficient capacity to contain the amount of fluid mentioned. The following are the weights of the whole diseased mass,

as accurately as could be ascertained, for a large quantity of the fluid part escaped without being measured:—Scirrhous mass, 8 lbs.; fluid (11 qts.), 22 lbs. Total, 30 lbs. If we add to this the amount of fluid previously removed (11 quarts), making 52 lbs., it will more than equal one half of her present weight.

The tumor was attached to the body by the broad ligaments, and adhered to the omentum; much of the latter it was found necessary to cut, exposing a number of vessels which were principally secured by slender cat-gut ligatures, and the whole returned into the abdomen. Its principal attachment was pierced through its centre by a double strong silk ligature, and each half secured by itself, and the ends allowed to hang from the lower extremity of the wound.

During the operation the patient was kept under the full influence of chloroform, and she was perfectly unconscious of all the proceedings, until the wound was being closed with sutures. The operation was followed by no unpleasant symptoms, and her recovery has been steadily progressive. The wound is entirely healed, and she now sits up more than half of the day. She has a keen relish for food, and no vestige of disease apparently remains, the prolapsed parts having returned to their normal position.

The operator was ably assisted by Drs. Dickinson, Morison and Field, of this city.

February 10*th*, 1853.

CASE OF HÆMOPTYSIS.

BY I. F. GALLOUPE, M.D., LYNN, MASS.

[Communicated for the Boston Medical and Surgical Journal.]

THE subject of this case is a woman about 20 years of age; has been married a year, and is now (Dec. 5th) in the fourth month of her first pregnancy. For a year before the illness I am now going to describe, she had suffered more or less from a "hacking cough" and night sweats; was thin in flesh, and of a slender constitution.

On Sunday evening, Dec. 5th, she remarked that she felt unusually well; her cough was gone and appetite much improved. She retired to bed and went to sleep, but awoke suddenly about 12 o'clock with blood pouring in a torrent from the mouth and nostrils, and soon after began to vomit. I was called immediately, and found her laboring under great difficulty of breathing, accompanied by a loud gurgling, which could be heard distinctly at a distance of thirty feet; coughing and spitting blood incessantly. The skin was pale and cool, the countenance anxious, and the pulse fluttering. At about 1 o'clock re-action began to take place, the skin soon became hot, pulse 108 and quite full, severe headache. At 2 o'clock the dyspnœa became less, and the cough ceased altogether. The quantity of blood which had been raised was about two pints.

Monday, at 9 o'clock, A.M., the patient began to cough again with violence, and spit blood, and soon after vomited. The dyspnœa was

very great. This attack lasted until about 12 o'clock, when she became easy. The quantity of blood lost was four ounces. At 6 o'clock, P.M., hemorrhage occurred again, with the same train of symptoms as before, and continued half an hour, during which time three ounces of blood were expelled. This evening the patient had two dejections from the bowels, chiefly blood. She had a comfortable night and some sleep.

Friday.—With the exception of an occasional cough, with spitting of blood, the patient has been comfortable since Monday. At 11 o'clock, A.M., the hemorrhage, with its retinue of symptoms, appeared again, and continued about an hour. A similar attack occurred at 2 o'clock, P.M., another at 6 o'clock, and another at 8 o'clock. During the last attack (which continued two hours) no florid blood was seen, but a large number of firm, stringy coagula, appearing as if they came from the smaller bronchi. From Monday to Friday, or during the time which the hæmoptysis was comparatively trifling, large quantities of blood were discharged from the bladder, mixed with the urine. All the urine passed during that time was bloody; and when the patient was attacked with bleeding from the lungs again on Friday, the urine became of a pale color, and of course unmixed with blood.

Saturday the patient was comfortable through the day. She coughed about once every fifteen minutes on the average, and then raised a little florid blood. The urine was bloody; she slept some during the following night, but towards morning the cough increased somewhat; and after raising some fresh blood, she coughed up some dark-colored coagula. The pulse ranged from 120 to 140.

Sunday.—She continued much the same as the day before, until midnight (precisely one week from the first attack), when she had another, and (as yet) her last attack of hæmoptysis. Not much florid blood was raised at this time, but for an hour she coughed up tough coagula as fast as an attendant could pick them out of her throat with the fingers. There was great prostration—the pulse was small and intermittent, and beat 140 times per minute.

I preserved the largest coagulum that I could find. It measured four inches in length, and five lines in diameter at the large end; it had a large number of bifid branches, the whole resembling in shape a miniature tree.

From this time she slowly improved until she was able to move about the house without assistance, and to ride out in pleasant weather, in which condition she remains at present.

Upon inquiry I found that the hemorrhage commenced at precisely the time the patient would have menstruated had she not been pregnant. The hemorrhage continued just a week (the length of her menstrual period) without intermission, alternately from the lungs and bladder. These facts suggest the idea that it was connected in some way with menstruation.

Another point of interest is the enormous quantity of blood lost without proving speedily fatal.

January 10th, 1853.

SUCCESSFUL TREATMENT OF OPIUM EATERS.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—When Superintendent of the Maine Insane Hospital, a few years since, a lady, aged 58 years, came under my care on account of a confirmed habit of eating opium or its preparations. She contracted the habit six years previous, in a hospital in your State, where she was treated for insanity. It had become so confirmed, that when unable to procure the article, the whole family were annoyed by her lamentations much of the night.

She was put on such an allowance of sulph. of morphine and sulph. quiniæ in solution, as kept her quiet. The medicine was administered three times a-day. The quinine was continued without diminution for four months, and the morphine so gradually diminished as to be wholly left out at that period. The quinine was continued, in diminishing quantity, two months longer, when she ceased to take either. She remained still six months, to prevent the possibility of obtaining an opiate. She has remained well ever since, and has no wish for the medicine.

Case II.—A gentleman, aged 65 years, for ten years had had an increasing ulcer on the lower part of the right leg, with varicose veins extending to the groin. When I first saw him the ulcer occupied the whole surface of the leg for eight inches above the ankle. To mitigate his sufferings, he had used opium to such an amount that the last year three pounds of the drug were eaten. Four ounces were his allowance per month. At this time he was prostrated so as to render his recovery beyond the hope of his friends.

I advised and made the amputation of the thigh. The cure was favorable; but the use of opium undiminished.

In consultation with the attending physician, in January, of 1852, three months after the amputation, it was agreed (the patient consenting) that sulph. of morphine, equivalent to one ounce of opium, and twenty grains of sulph. quiniæ, should be dissolved in f ʒ xss. of water, with a few drops of sulph. acid, as the allowance the first week, in half-ounce doses, three in a day. Each succeeding week, all things the same, except a very trifling diminution of the sulph. of morphine.

The entire success of the plan is shown in the following extract from a letter received two days since.

"I am the daughter of the man whose leg you amputated some more than a year since. Father's health is perfectly good; his weight is about 200 pounds. He got through with his medicine to wean him from opium, last July. We had a pretty hard struggle at the last, but we conquered."

I am aware of the difficulty, in private practice, of insuring perseverance, but the above cases are valuable as showing what may be done.

Yours, &c.

James Bates.

Kendall's Mills (Me.), February, 1853.

OXALIC DIATHESIS—OXYGENATED BITTERS.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—Dyspeptic invalids often put the inquiry to you, doubtless, as they do to other physicians—"Will it do me any good to take the Oxygenated Bitters?" I propose to make a suggestion as to the class of patients who are benefited by this popular nostrum, and to state what I suppose to be the cause of its usefulness. If in doing this, I can withdraw it, even in the minds of a few, from the list of the secret agencies of hocus-pocus, and transfer it to that of comprehended therapeutic remedies, acting upon rational principles, something will be done, worth, at least, the trouble of tracing these lines.

There is a large class of dyspeptic patients who suffer greatly with depression of spirits. They generally have the dark and dingy look of the face which indicates functional derangement of the liver. They are usually emaciated, nervous, hypochondriacal, fearing consumption. They are irritable in temper, seem incapable of exerting themselves, and are exhausted by an excessive secretion of urea. The urine of such persons is always acid, and *loaded with crystals of oxalate of lime.*

I find among the numerous persons I am treating for diseases of the air-passages, that many of them suffer with depression of spirits; and these all have a deposit of oxalate of lime in the urine. This fact, which has been observed by others, has been explained by supposing that the imperfect oxygenation of carbon in inflamed respiratory organs, is vicariously effected in the capillaries of the kidneys—oxalic acid ($C_2 O_2$) instead of carbonic acid ($C O_2$) being the result.

There is another class of persons who suffer much from the oxalic diathesis. It consists of lawyers, clergymen, statesmen; and, in general, those who labor hard mentally with but little bodily exercise, and who have a great weight of care resting upon them.

The crystals of oxalate of lime are octahedral in form; and, in the field of a good microscope, are beautiful objects of inspection. To obtain them, take a portion of urina sanguinis, and let it stand till a deposit takes place. Pour off the upper portion of the urine; put a part of the remainder in a watch-glass, and gently heat it over a lamp. The heat will cause a deposit of the crystals.

The proper treatment of the form of disease here described—a treatment to which it generally yields—is the following:—A careful regulation of the diet, and out-door exercise, with the use of small doses of blue pill, and nitric acid, or nitro-hydrochloric acid (which is better), mixed with the compound infusion of gentian.

The main part of the treatment is the acid; and I am confident—though I am not aware that any chemical analysis has been made—that the "Oxygenated Bitters" are composed chiefly either of nitric acid, or nitro-hydrochloric acid in the form of aqua regia. It is this principal component, I have little doubt, which has given this nostrum its success in the form of dyspepsia here spoken of, and which has brought so many certificates to the proprietors from that class of persons, including

statesmen and others, whom I have mentioned as having oxalate of lime in their urine. IRA WARREN.

Winter Place, Boston, February, 1853.

PERMANENT CURE OF REDUCIBLE HERNIA.

[THE Report of a Committee of the American Medical Association, consisting of Drs. Geo. Hayward, J. Mason Warren, and S. Parkman, all of Boston, on the treatment of hernia, is contained in the last published Transactions of the Association. As it relates to an important class of surgical cases, which every practitioner is liable to be called on to treat, and coming as it does from a committee well qualified to impart information on the subject, we copy a large part of it into our pages. After referring to the answers to their published inquiries, which were received by them from only seven members of the profession, the report proceeds—]

While the Committee would express their grateful acknowledgments to the individuals who have made the communications that have just been referred to, they at the same time do not feel that all the information has in this way been obtained that the Association have a right to expect. They have, therefore, looked to other sources in addition, to aid them in the preparation of their report; and they will now state, as briefly as they can, what has been done in relation to the radical cure of reducible hernia, and the opinions they have formed on the subject.

It is hardly necessary to go into a detailed history of the various methods that have been employed for the last eighteen hundred years for the permanent cure of reducible hernia. A very interesting and condensed account of them may be found in a dissertation, by Henry Bryant, M.D., of Boston, on "The Radical Cure of Inguinal Hernia," published during the present year, and for which the Boylston Prize was awarded to the author in the year 1847.

All the operations that have been practised for this purpose, till within the last fifty years, have been of a severe character; some of them dangerous, and in many instances death has been the consequence. *Cauterization*, *ligature*, *sutures*, *excision* of a *part* or the *whole* of the *sac*, and *castration*, were the principal operative methods in use for eighteen hundred years. The object of all of them was to obliterate or contract the neck of the sac, and thus prevent the protrusion of any of the abdominal contents.

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The severity, danger, and frequent failure of these operations, at length caused all of them to be abandoned; and Mr. Lawrence said with great justice, in his treatise on hernia, more than five-and-thirty years ago:—"Since the enlarged state of the tendinous opening is not removed by the processes adopted for a radical cure; since a recurrence of the disorder is not prevented, we may assert without hesitation that these operations do not afford any greater chance of complete relief, than the employment of a truss."

The Committee will next inquire whether any of the numerous methods that have from time time, since that period, been suggested and put in practice, have been attended with a greater degree of success. They will not go into a minute detail of all of them, but will present such a general view as will, they trust, make apparent the ground on which their opinions rest.

It should be remarked that none of the modern operations for the radical cure of hernia are as severe as the worst of the older ones of which we have already spoken ; though some of them, it must be admitted, are very objectionable on this account.

It should also be observed that the mere fact that so many have been suggested and tried, and that none of them have been received with a great degree of favor, or, if so, that they have not retained it for any considerable length of time, is strong presumptive evidence that there is either an inherent difficulty in the nature of the infirmity that is intended to be removed by them, or that the means of accomplishing it have not yet been discovered.

It is well known that most of these operations have been devised for the radical cure of inguinal hernia, as this is the most frequent form, and the one which is, on the whole, productive of the greatest inconvenience. The object has been to close either wholly or in part the neck of the sac, or plug up, without contracting, the tendinous opening through which the hernia escapes. It has been attempted to accomplish both these in various ways.

In some operations that have been performed for omental hernia, whether strangulated or merely irreducible, a portion of the omentum has sometimes been left in the inguinal canal, under the belief that the adhesions which it would form with the surrounding parts would prevent any future protrusion. Several surgeons have reported cases as successfully treated in this way ; but it is not stated for how long a time the patients enjoyed this immunity, and it cannot therefore be known whether the cure was permanent.

One of the Committee is able to state a case which came under his own observation, which, in his opinion, has an important bearing on this point. A healthy young man underwent an operation for irreducible omental hernia. All the omentum beyond the external ring was cut off; the inguinal canal was plugged up by the omentum, which was closely adherent to it ; and it was remarked at the time that the patient would never probably be troubled with hernia again. Within two years of that period, he was obliged to submit to an operation for strangulated enterocele on the same side. The very circumstance that was supposed to be sufficient to relieve him permanently was probably the cause why the hernia could not be returned by taxis.

It has been attempted to close the external ring by forcing the testicle into it, and then bringing on such a degree of inflammation as would be likely to retain it there by the effusion of fibrin. Sometimes this has been done without making an incision in the integuments, and at others the testicle has previously been laid bare.

This operation is certainly not admissible. It is unsafe ; it is not pro-

bable that the testicle could be kept either at the external ring or within the inguinal canal; if it could, it would, no doubt, be a source of great inconvenience and irritation, and in addition to all this, it would not, in all probability, prevent the return of the hernia, but would, on the contrary, rather facilitate it.

It has been attempted also to close the external ring and inguinal canal by means of the hernial sac. This operation has been done by Petit and Garengeot. The sac is first exposed; a portion of it is then crowded into the inguinal canal, under the expectation that adhesions would be formed between them sufficiently strong to prevent any subsequent descent of the hernia. This method is, perhaps, less objectionable than the preceding one, on the score of danger to the patient, though by no means entirely free from it, but is not any more likely to effect a cure. There is no reason to believe that it is performed by any one at the present day.

M. Gerdy has practised an operation, which consists in crowding the integuments into the inguinal canal, and removing the cuticle from them by means of caustic alkali. This is what has been called by the French "invagination by the integuments." Some modifications of this method have been suggested by M. Leroy and M. Signorini, but from what we have been able to learn, we do not deem it of sufficient importance to give any detailed account of it.

M. Velpeau states that he performed it once unsuccessfully; that it had been done by M. Gerdy upon thirty patients; and that, though many of them seemed for a time to have been cured, a sufficiently long period had not elapsed to enable any one to speak with confidence of the ultimate result. He also adds that he had seen three of the persons who had been thus operated on, and who thought for some time after the operation that they were cured, in all of whom the trouble had returned precisely as it was before.

The truth seems to be that the adhesions which may be formed between the integuments and the interior of the canal are not very firm, and that, though they may for a time prevent the descent of the hernia, yet, as they are gradually absorbed, no resistance is at length offered to it.

M. Velpeau observes that, though it is not actually a dangerous operation, there is some risk of wounding the epigastric artery, and there is some reason, too, to fear severe phlegmonous inflammation or fatal peritonitis.

M. Belma's operation attracted for a time some degree of attention, as it was less severe than that of M. Gerdy, and would, it was at first thought, be in all probability more successful. His first method consisted in introducing a small pouch of goldbeater's skin into the upper part of the hernial sac. This was followed by an effusion of fibrin, which, he supposed, would, together with the goldbeater's skin, become organized, and the two sides of the sac being firmly glued together must necessarily prevent any subsequent protrusion of the abdominal contents.

He afterwards modified his operation, because he found that his success did not equal his expectations. This he attributed to a deficiency

of inflammation; and with a view of increasing this, he introduced into the neck of the sac, as near the external ring as possible, small rolls of gelatine covered with goldbeater's skin. There is no reason to believe that the result of this proceeding was any more favorable than that of the other. The operation has fallen into disuse. M. Velpeau says that the hernia returned more frequently after it than it did after that of M. Gerdy.

Dr. Jameson, of Baltimore, has given a description of an autoplastic operation which he performed on a female for crural hernia. The Committee have not seen the original account of the case, but have derived their knowledge of it from the statements that have been made in the works of others.

The sac was laid open, and the crural ring was filled up by a portion of the integuments, which were cut into a proper form and inverted. This was confined in its situation by sutures. Adhesion is said to have taken place, and the patient was regarded as cured.

Admitting that there was no danger in the operation, it is certainly not probable that any union would take place between the integuments and the ring that would be permanent; on the contrary, it can hardly be doubted that the fibrin effused in the first instance would be gradually absorbed, and that a protrusion of some of the abdominal contents would ere long again take place.

It is believed that this operation has not been repeated; or, if it has, the result, so far as we know, has not been made public. This fact would perhaps justify the inference that the relief obtained by the patient on whom Dr. Jameson operated was not permanent; otherwise, it would be difficult to explain why a similar operation should not have been adopted in other instances.

M. Graefe has described a very barbarous mode he took to bring on inflammation in the inguinal canal, with a view to the radical cure of hernia. It has no advantage over the old and justly-reprobated operation of the excision of the sac, while it is almost as severe, and far more dangerous. It consists in laying bare the neck of the sac at the external ring, cutting it off at that place, and then introducing a piece of lint, smeared with some stimulating ointment, into the inguinal canal, carrying it up to the internal ring, or even beyond. One end of a piece of string is to be tied around the lint, and the other end is brought out at the wound. When suppuration is well established, the lint becomes loose and can be readily withdrawn. This is said to take place usually in three or four days, and the amount of inflammation that is induced would be sufficient, it was thought, to prevent any future descent of the hernia.

This operation has been performed, it is said, with success in a few cases; a result certainly not to be looked for, and the expectation of which would not justify any man, who had a proper regard for human life and his own reputation, to repeat it.

The introduction of a seton has been recommended as a likely means of closing the neck of the sac. It has been advised to keep it in till suppuration comes on, and then withdraw a part of the threads daily, till

all of them are removed. It was supposed that in this way adhesion might be produced between the opposite sides of the sac.

It is not probable, from what we know of its effects in hydrocele, that this would succeed; and it is much more probable that it would bring on such a degree of inflammation in the peritoneum as would terminate in death. From what is known of the laws of inflammation, there is much more reason to suppose that the suppurative process rather than the adhesive would be induced by this long-continued irritation; so that, while the patient would be exposed to great hazard, he would have but a small chance of a cure.

M. Bonnet, an eminent surgeon of Lyons, has attempted to close the neck of the sac by exciting inflammation in another way. From two or four pins, with double the number of small pieces of cork, are all the instruments that are required for his operation. The contents of the hernial sac having been returned, a pin which has been passed through one of the pieces of cork is then pushed through the integuments and the neck of the sac, as near as possible to the external ring, care being taken not to wound the spermatic cord. The pin is then brought out on the opposite side, and the point is carried through another piece of cork. Another pin is then introduced in the same way. Two are usually all that are necessary; but occasionally one or more additional ones may be required. The point of the pin which projects from the cork is seized with a small pair of pliers, and bent over so as to bring the opposite sides of the sac into close contact. This is done to all the pins, and this process is repeated from day to day, till it is thought a sufficient degree of inflammation is produced to cause adhesion. When this has taken place, the pins should be removed, and this is usually in from six to twelve days.

M. Mayor, of Lausanne, has modified this operation by using needles instead of pins, carrying in this way ligatures through the neck of the sac, which are afterwards tied over pieces of sponge. These can be tightened as much and as often as may be thought necessary to produce the desired effect. The number of ligatures required for this purpose must depend on the size of the hernial sac.

These operations are not attended with much danger, and are by no means difficult to perform. At the same time they offer but little prospect of a successful result. They are insufficient for the purpose for which they are intended. They do not obstruct in any degree the inguinal canal, and even when most successful, they only partially close the neck of the sac.

For these reasons, probably, if not for others, they have fallen entirely into disuse, not being resorted to even by the inventors of them.

[To be concluded next week.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, FEBRUARY 23, 1853.

Comparative Anatomy.—Important as the dissection of the lower animals is to a correct knowledge of the anatomy of man, it has never been a popular branch of study in the medical schools of the United States. Natural history is a favorite with a majority of medical men, and is studied as far as their professional engagements will permit; but it so happens that they have not added as much to the domain of knowledge in that fascinating pursuit as they might and should have accomplished, simply because the very foundation of all durable progress in that direction must consist in knowing the anatomical relations which one creature bears to another, and in this they are not generally proficients. There never was a better opportunity than at the present moment for ambitious students to rise to a lofty position as naturalists, by giving an undivided attention to comparative anatomy. An American work, the result of personal researches on our own soil, by an enthusiastic and diligent inquirer into the structure of animals, would be hailed with delight. In the medical colleges, where the demonstrations are sometimes intolerably stupid, a little variation from the hum-drum routine of a daily display of human muscles, the names of which, unfortunately, are not unfrequently represented as being quite as important as the organs themselves, by a few lessons on the organization of dogs, horses, birds, reptiles and fishes, would immensely relieve the dull tedium. But what is most needed, is a treatise, under the influence of a name that would create a little enthusiasm in a pursuit that is full of interest. The study of comparative anatomy wonderfully modifies the erroneous idea that the Creator has alone been mindful of man. True, man is the superior animal, if animal he is; but the mechanism of an insect or an infusorial mite, too small for recognition by the unaided eye, exhibits the transcendent skill as well as care of Omnipotence, in providing for them tubes, cords, and vital apparatus, with organs of sense perhaps as keen as our own. Comparative anatomy enlarges the sphere of thought; it cannot be otherwise in the case of one who delights in studying the beautiful forms in which life is exhibited. Further still, it humbles us, by showing our relationship to the whole chain of animal organizations, whether agreeable or repulsive, and also presents such a flood of evidence of the superintending care of God over all his works, that he must be insensible indeed, who does not adore the Being who sustains and controls the whole.

Incentives to Study.—Dr. Lawson, of the Medical College of Ohio, took for his subject, in an introductory address on opening the thirty-third annual course of medical lectures in the institution of which he is a prominent member, *the incentives, means and reward of study.* He has been too long in the field, as a writer, to be disturbed by criticisms, were any one disposed to make them; and besides, it would require something more than ordinary critical acumen to detect a careless expression, a crude thought, an unphilosophical suggestion, or a literary mistake, in a paper from his pen. Dr. Lawson makes the feathers fly on touching homœopathy. Mysti-

cism loses all its attractive traits under his withering stroke. The incentives to study are poetically portrayed, and are excellently well set forth.

Boston Lunatic Hospital. — On account of mislaying the report of this hospital, a word in relation to it is deferred to this late day. There are no striking features in the organization of the establishment for insane paupers, at South Boston, demanding a notice. The medical superintendent represents the necessity for further accommodations. From 1840 to 1852, 820 patients were admitted; 584 were discharged; 62 were more or less improved; 266 recovered, and 244 remain. Foreigners are the principal inmates. The physician has presented a good, though brief report. In more respects than one, it is a model, and might be advantageously imitated by those indefatigable persons who, in reporting their official doings, never know when to stop.

Blanchard & Lea's Medical Catalogue.—Under the cognomen of *Medical Advertiser*, these Napoleons of publishers have distributed a list of those fine editions of theirs which we all covet. It is an interesting document, though the paper is rather coarse, and the type too fine for the fathers of physic to read, even with glasses. Why don't the booksellers affix the prices in the margin of their catalogues? It would immensely oblige many who would become speedy customers, had they any data to proceed upon touching the cost of books. This is indeed a consideration with those who earn their money as the country practitioners do, by a course of fatigue, night and day, quite incomprehensible to city physicians in white gloves and patent leather shoes. As we are often consulted by letter writers respecting the prices of volumes, we have reason to believe it would oblige the fraternity at large, if the simple improvement of the cash prices were added to catalogues and advertisements.

Philadelphia College of Physicians. — The Quarterly Summary emanating from the respectable body above named has long been a favorite with us; and like the Irishman who longed for an annual crop of potatoes twice a year, we wish this Quarterly were issued once a month. A leader in the last number, is a memoir of the late distinguished and extensively lamented Dr. Samuel George Morton, with a fine miniature engraving. The memoir is drawn up by the accomplished Dr. Geo. B. Wood, of Philadelphia. It is ably written, by one who ranks high as a scholar, and who was the personal friend of the deceased. It cannot be abridged, nor should it be, if it could, as the beauty of the sketch would suffer materially. Dr. Wood has a style quite his own—smooth, plain, expressive and often elegant. Of the other articles in this number, the one on yeast in diabetes possesses much interest, and we recommend it to the special reading of the profession. The disease puts almost all medication at bay; but it is possible that a principle has been detected, in the new treatment, that may lead to very important therapeutic results. Remarks on the bites of venomous serpents, with cases, are exciting. The rapidity with which the poison is conducted from the foreign extremity of a finger to the axilla, is perfectly amazing.

Periods for Repeating Doses of Medicine.—Notwithstanding the unwillingness of one medical journalist to admit Dr. Tully's ability to produce

anything good in his new Pharmacologia, we have discovered some excellent suggestions already, although the author has scarcely advanced beyond the preamble to the body of the work. On the 142d page, No. 3, Dr. Tully has taken hold of the bull by the horns, in the matter of piece-mealing doses, which is an arbitrary custom with many practitioners, without any regard to fixed laws or principles. A physician orders certain powders, for example—one of which is to be taken every three or four hours; but if he were closely questioned and compelled to assign a philosophical reason for the mechanical course so often adopted, let the malady be what it may, it would be a perplexing question to answer. The theory influencing his mind, is probably this—that the medicinal power of a dose is presumed to have been expended, or nearly so, when the next is given, and thus it is like shovelling coals under the boiler to keep the steam up to a working point. Dr. Tully remarks, that "it is to a great extent the custom among physicians to have a certain set period for the repetition of doses of almost all medicines which they employ, whatever may be the case; a period having no exact, but only an accidental reference to the duration of the effects of medicines, and the nature and character of the cases in which they are employed. The consequence of this method of practice is, that the proportion of cases of chronic disease, in which any benefit is derived from medication, is so small, that the practitioner soon becomes a perfect sceptic in regard to the medicinal efficacy of most of those remedial agents which are ordinarily employed in chronic diseases; and he therefore expunges most of them from his materia medica, or employs them as placebos merely; and he is likewise liable to become sceptical in regard to the efficacy, and, indeed, utility, of all medical treatment in any chronic case." Here is room for reflection. The timing of doses must necessarily influence the condition of the patient. Too much, too often, or an excess, growing out of the mechanical course of ordering nurses beforehand how to proceed with the pills, decoctions and drops, involves consequences of the highest import. The success of treatment may be vastly more influenced by watching the pulse, than in numbering hours on the dial. Dr. Tully has made a suggestion that will perhaps considerably agitate medical circles hereafter.

Professorial Qualifications. — On the 175th page of the Pharmacology, the author asserts that he has repeatedly known literary and scientific men, who had never read a page of medicine, make application to the non-medical corporations of our colleges for medical professorships, apparently without the least consciousness that they could not fill them as well as the best practical physicians. He further observes, "I have been informed that the department of materia medica was taught in this way in one of our colleges, for a considerable time. With such instructers, Flower's advertisement of his Mississippi Fever Tonic, and Kendall & Co.'s advertisement of Electrical Febrifuge, or Speed's Fever Tonic, would be as high authority as Pereira, Stephenson and Churchill, Woodville, Cullen or Louis." Strange revolutions await a coming age, explanatory of the manner in which certain great men became great—not through their intellectual acquirements, but by the easier process of having friends at court.

Female Medical College of Pennsylvania.—The following is a list of the graduates of this College at the Commencement, Jan. 27, 1853, with the subjects of their theses:

Hannah W. Ellis, Philadelphia, Parturition. Henrietta W. Johnson, New York city, Functions of the Skin. Annan N. S. Anderson, Bristol, Pa., General Physiology. Charlotte G. Adams, Boston, Mass., De Effectis Lactationis Nimia. Julia A. Beverly, Providence, R. I., Ferrum. Margaret Richardson, Philadelphia, Phthisis Pulmonalis. Almira L. Fowler, New York city, Relations of Body and Mind. Maria Minnis, New York, Medical Jurisprudence. Augusta R. Montgomery, New York, Medical Education of Women.

American Medical Society.—Under the General Act of the State of N. York of 1848, the American Medical Society has just been chartered in the City of New York, with authority to establish a National College, National Hospital, Library, and an Anatomical Museum. The following gentlemen have been elected as officers for the present year: President, Wooster Beach, M.D.; 1st Vice President, Wm. Turner, M.D.; 2d Vice President, J. L. Van Doren, M.D.; Recording Secretary, E. Whitney, M.D.; Corresponding Secretary, J. Coleman, M.D.; Treasurer, J. D. L. Zender, M.D.

It is evident enough, from an examination of the foregoing names, what the character of the institution will be. A charter was by no means necessary.

Medical Miscellany.—A compound solar microscope has recently been commenced in the city of New York, by Professor J. Hinds, formerly of Salem, N. Y., capable of magnifying objects 17,450,000 times. — M. Reybard has taken the Argenteuil prize for a treatise on the most practically useful improvements in the treatment of urinary diseases; which prize, by the accumulation of an ancient fund, in 1852 was £480.— Inoculation for syphilis, a most insane idea, has been denounced in Paris by the Academy. — Health insurance companies, which were exceedingly active hereabouts a year ago, have finally all disappeared. The public discovered that the managers and officers were sure of their salaries.—Suicides are increasing in France. Those in fear of the attentions of the government, pop out of the way of the police without apology.—The second number of Dr. Griswold's Esculapian is published.—Fifty arguments in favor of sustaining and enforcing the Massachusetts Anti-Liquor Law, by Rev. Rufus W. Clark, are widely circulated. He says, from estimates carefully made, there are 400.000 drunkards in the United States, who, with the moderate drinkers, pour down their throats 60,000,000 gallons of ardent spirits annually!

To Correspondents.— A paper on the treatment of Uterine Displacements at the South, and a notice of the death of the late Dr. Colby, of New Hampshire, have been received.

Died,—At Princeton, Dr. Warren Partridge, 55.—At Guilford, Maryland, Dr. Benj. Gale, 102. In Paris, Dr. Baird, by suicide.— In the interior of Australia, Dr. Leichardt, the celebrated traveller, murdered by the natives.

Deaths in Boston—for the week ending Saturday noon, Feb. 19th, 78.—Males, 36—females, 42. Accidental, 1—inflammation of the bowels, 3—congestion of the brain, 1—consumption, 20—convulsions, 1—croup, 7—dropsy in the head, 2—infantile diseases, 5—puerperal, 1—epilepsy, 1—erysipelas, 1—fever, 3—typhus fever, 1—scarlet do., 7—hooping cough, 5—hemorrhage, 1—homicide, 1—inflammation, 1—intemperance, 1—influenza, 1 — inflammation of the lungs, 3—marasmus, 3—old age, 1—pleurisy, 1— rheumatism, 1—teething, 3—tumor, 1—ulcer, 1.

Under 5 years, 36—between 5 and 20 years, 7—between 20 and 40 years, 17—between 40 and 60 years, 12—over 60 years, 6. Born in the United States, 57 — Ireland, 19 — Germany, 2. The above includes 3 deaths in the city institutions.

Opium Eating.—Dr. D. J. McGowan, of the Hospital at Ningpo, China, in his report for 1852, writes as follows respecting the treatment of that class of persons who have been so unfortunate as to contract the habit of taking opium to excess. A report of the treatment of similar cases will be found in to-day's Journal, communicated by Dr. Bates, of Maine.

"The most interesting part of my labors in a moral, if not professional point of view, has been the treatment of opium patients, several hundreds of whom are living witnesses to the success of the means employed for their relief. Not a few of these are of several years standing; men too, who are occupied all day in labor requiring great muscular activity, and from whom every vestige of the characteristic features of the opium victim has been effaced. Some, whose vital powers were nearly exhausted, are now stalwart chair-bearers, disenthralled from the deadly vice, and once more in the enjoyment of existence. This success has been mainly owing to the stringent conditions with which they are made to comply in order to their reception as patients. Only the most resolute, or those who, impoverished by the expensive vice, are outcasts, and destitute alike of means of procuring the drug, and even the necessaries of life; persons who have no other resource, and to whom existence is a burden, are found willing to submit to the ordeal. No opiate is ever administered to assuage the agony which the immediate and total deprivation of the charming stimulus occasions, except Dover's powder, which is given to check the wasting diarrhœa, an inevitable sequence of absence from opium in the habitual smoker. The agony of the poor creatures is indescribable; yet animated by hope on one side, and terrified at the prospect of an early and miserable death on the other, a majority of them endure it all, until a natural appetite for wholesome nourishment is excited, when they may be considered safe. During this period they are sustained by various stimulants. It is quite possible to effect the cure of an opium-smoker by administering opiates in doses gradually reduced, which is the method pursued by native practitioners; but persons who have been relieved of the habit in this manner, are prone to relapse, making their condition more hopeless than ever."

Tenacity of Life.—On Monday, Jan. 17th, at Wells, Me., a farmer slipped from his hay mow into the barn floor, and in his descent fell upon the point of a hay puller, which entered his abdomen and passed through his back. Thus impaled on a wooden stake, the sufferer lay on the floor in agony which may be imagined, but not described, for about an hour. He was then removed, as soon as discovered, to his house; and two neighbors went on the railroad in a hand car to South Berwick, nine miles, and returned with Dr. Trafton, of that village, who was obliged to cut and make incisions in the sufferer (who is a fleshy man, weighing about two hundred pounds) to the extent of six inches, before the rude instrument could be extracted from his body. He accomplished it, however, and dressed his wounds; and on Tuesday morning, the patient was quite comfortable.

Boletus Laricis, or White Agaric, as a Purgative.—Dr. Wm. M. McPheeters has tried some experiments with the Boletus Laricis, which, though notnumerous enough to determine its value as a cathartic, are sufficient to justify more extended experiments. The Boletus Laricis grows abundantly in the Rocky Mountains. It is a fungus on the white pine of that region.—*St. Louis Med. and Surg. Journal.*